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10. (Amended) A method according to Claim 1 in which the field difference signal is summed over all or a substantial part of the picture to create a global difference signal and the local detail from one or both fields is summed over all or a substantial part of the picture to create a global detail signal and a corrected field difference signal is obtained by subtracting all or a proportion of the global detail signal from the global field difference field.

11. (Amended) A method according to Claim 1 in which a field difference signal is output for each pixel of the current field.

12. (Amended) A method according to Claim 1 in which a field difference signal is output for each of a number of regions of the current field.

13. (Amended) A method according to Claim 1 in which a single field difference signal is output for the current field.

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19. (Amended) A process according to Claim 17 in which a component in the or each field difference signal which arises from vertical detail is removed by taking a measure of vertical detail from one or more input fields and subtracting either all or a proportion of the detail measure from the or each field difference signal.

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22. (Amended) A process according to Claim 20 in which a component in the or each field difference signal which arises from vertical detail is removed by taking a measure of vertical detail from one or more input fields and subtracting either all or a proportion of the detail measure from the or each field difference signal.

Cancel Claims 14, 15 and 16.

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25. (New) A method according to Claim 6 in which the field difference signal is summed over all or a substantial part of the picture to create a global difference signal and the local detail from one or both fields is summed over all or a substantial part of the picture to create a global detail signal and a corrected field difference signal is obtained by subtracting all or a proportion of the global detail signal from the global field difference field.

CLAIMS

1. A method of analysing motion between adjacent fields of an interlaced video signal, comprising the steps of vertically interpolating one or both of the fields to produce respective signals for the two fields which correspond in vertical position; subtracting the signals to provide a field difference signal; and removing a component in the field difference signal which arises from vertical detail.
2. A method according to Claim 1 in which a component in the field difference signal which arises from vertical detail is removed by taking a measure of vertical detail from one or both of the fields and subtracting either all or a proportion of the detail measure from the field difference signal.
3. A method according to Claim 2 in which a measure of local detail is used to correct the field difference signal.
4. ~~A method according to Claim 2 or Claim 3 in which a measure of global detail is derived by summing the local detail from one or both fields over all or a substantial part of the picture and all or a proportion of the global detail signal is used to correct the field difference signal.~~
5. A method according to Claim 1 in which a component in the field difference signal which arises from vertical detail is removed by comparing a first field difference signal provided for a current field and the immediately preceding field with a second field difference provided for a current field and the immediately succeeding field.

6. A method of creating a field difference signal by subtracting video signals from different fields characterised in that one or both of the fields are vertically interpolated prior to subtraction by taking weighted sums of lines from within the same field so as to obtain signals corresponding to similar vertical positions.
7. A method according to Claim 6 in which the result of the subtraction is corrected by taking a measure of vertical detail from one or both of the fields and either all or a proportion of the detail measure is subtracted from the field difference signal.
8. A method according to Claim 7 in which a measure of local detail is used to correct the field difference signal.
- 505a27* 9. A method according to Claim 7 or Claim 8 in which a measure of global detail is derived by summing the local detail from one or both fields over all or a substantial part of the picture and all or a proportion of the global detail signal is used to correct the field difference signal.
- 505a27* 10. A method according to any one of the preceding claims in which the field difference signal is summed over all or a substantial part of the picture to create a global difference signal and the local detail from one or both fields is summed over all or a substantial part of the picture to create a global detail signal and a corrected field difference signal is obtained by subtracting all or a proportion of the global detail signal from the global field difference signal.
- 505a27* 11. A method according to any one of the preceding claims in which a field difference signal is output for each pixel of the current field.

- 505a27 12. A method according to any one of the preceding claims in which a field difference signal is output for each of a number of regions of the current field.
- 505a27 13. A method according to any one of the preceding claims in which a single field difference signal is output for the current field.
14. Apparatus for the geometric transformation of television pictures for special effects in which an interpolation process is modified in response to a field difference signal derived in accordance with any one of Claims 1 to 13.
15. Apparatus for aspect ratio conversion of television pictures in which an interpolation process is modified in response to a field difference signal derived in accordance with any one of Claims 1 to 13.
16. Apparatus for standards conversion of television pictures in which an interpolation process is modified in response to a field difference signal derived in accordance with any one of Claims 1 to 13.
17. An interpolation process in which an output is created by taking a weighted sum of contributions from one or more selected input fields; comprising the steps of vertically interpolating one or more input fields to produce respective signals for at least two input fields which correspond in vertical position; subtracting the signals to provide a field difference signal for at least one pair of adjacent input fields; and utilising the or each field difference signal to select input fields for interpolation.

18. A process according to Claim 17 in which field difference signals are provided for the pair of input fields comprising a current input field and a preceding input field and the pair of input fields comprising the current input field and a succeeding input field.

505a37 19. A process according to Claim 17 or Claim 18 in which a component in the or each field difference signal which arises from vertical detail is removed by taking a measure of vertical detail from one or more input fields and subtracting either all or a proportion of the detail measure from the or each field difference signal.

20. A video filter process in which an output is created by taking a weighted sum of contributions over a filter aperture which defines the lines and fields from which a contribution is to be taken and the weighting of each contribution; comprising the steps of vertically interpolating one or more input fields to produce respective signals for at least two input fields which correspond in vertical position; subtracting the signals to provide a field difference signal for at least one pair of adjacent input fields; and utilising the or each field difference signal to select a filter aperture.

21. A process according to Claim 20 in which field difference signals are provided for the pair of input fields comprising a current input field and a preceding input field and the pair of input fields comprising the current input field and a succeeding input field.

505a47 22. A process according to Claim 20 or Claim 21 in which a component in the or each field difference signal which arises from vertical detail is removed by taking a measure of vertical detail from one or more input fields and subtracting either all or a proportion of the detail measure from the or each field difference signal.

23. A method of automatically changing the operation of a video process between a film mode in which adjacent fields are assumed to correspond to the same point in time and a video mode in which adjacent fields are assumed to correspond to different points in time, comprising the steps of vertically interpolating one or more fields to produce respective signals for at least three input fields which correspond in vertical position; subtracting the signals to provide a preceding field difference signal for the pair of fields comprising a current field and a preceding field and a succeeding field difference signal for the pair of fields comprising the current field and a succeeding field; comparing the preceding field difference signal with the succeeding field difference signal and changing the selection to film mode if the field difference signals are significantly different, and changing the selection to video mode if both signals are similar but not small.
24. A method of video process control according to claim 23 in which the film difference signals are considered to be significantly different if one differs from a multiple of the other by more than a predetermined threshold.

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